

Descriptions of some new species of *Carabidae* from North India

BY

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Several small collections of Carabidae from North India have lately been received by me for determination, and among the species and varieties I have found some new ones, eleven of which are described in the following pages. One small collection of Sikkim insects was received many years ago from Mr. René Oberthür by the Museo Nacional de Ciencias Naturales of Madrid, and on examination I find it to contain several undescribed species, of which Mr. Oberthür had also been kind enough to give me examples some years ago. Another collection, entrusted to me by Dr. H. Roeschke, was made about 1905 by the late Carl Rost high up on the mountains and in the passes of Kashmir. Other insects have arrived quite recently from Mr. H. G. Champion, mostly taken in the mountains of the Punjab. One of the new species, *Bembidion bolivari*, is of special interest owing to its unusual characters, while *Licinus jaloricus* is the first species of the genus described from India.

The illustrations in the text were all drawn by Mr. D. E. Kimmins.

***Leïstus kashmirensis* sp. nov. (fig. 1).**

Length: 9.5-10.0 mm. Width: 3.3-3.5 mm.

Piceous-black; mouth-parts, joints 2-II of antennae, tibiae, and tarsi more or less ferruginous.

Head fairly wide, strongly constricted behind eyes, practically smooth behind, some fine irregular striation at sides and in front, a few small punctures near eyes, which are moderately prominent, supraorbital pore conspicuous, placed well behind middle of eye and

a little removed from it, clypeus truncate in front, longitudinally sulcate, labrum large, arcuate, mandibles rather short, dilated laterally, mentum with half a dozen bristles at base, gula with a transverse, 8-setose ridge, joint 5 of antennae quite half as long again as 3. *Prothorax* convex, a fourth wider than head and a third wider than long,

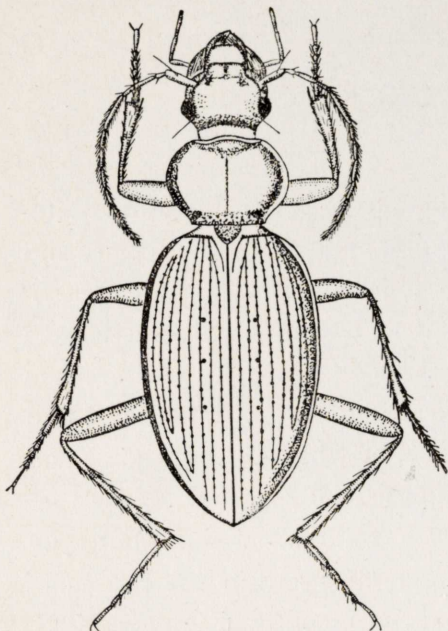


Fig. 1.—*Leistus kashmirensis* Andr.
× 6.

a little more contracted behind than in front, base truncate, apex bisinuate, projecting somewhat forwards at middle, sides bordered, reflexed, somewhat explanate, apparently without lateral setae (though this is not certain), strongly rounded, and brusquely sinuate close to hind angles, which are slightly acute and very sharp; median line, transverse impressions, and basal foveae all moderately deep, surface smooth, with the basal area rather coarsely punctate, a few punctures in marginal channels and along front transverse impression. *Elytra* ovate, moderately convex, a little less than a half wider than

prothorax, fully two thirds longer than wide, shoulders evident, side border reflexed, meeting basal border at an angle, which forms only a rudimentary tooth; deeply punctate-striate, striae less deep close to apex, intervals convex, smooth, 3 with three (sometimes four) pores, all more or less on disk. There is a microsculpture of slightly transverse meshes on prothorax and elytra, isodiametric ones on head. Episterna and base of venter more or less punctate, ventral segments bisetose, last one with a single seta on each side in ♂, 2 in ♀.

The new species differs altogether from *L. championi* Andr. in the form of the mandibles and from *L. indus* Tchitch. in colour. It appears most nearly allied to *L. nivium* Andr., and, in spite of the apparent want of marginal setae on the prothorax, seems best placed in the subgenus *Leistophorus*. A little larger than *nivium*, the head larger, the antennae longer, supraorbital pore placed further back and more

distant from eye, gular ridge 8 instead of 4-setose; prothorax with sides more reflexed and sinuate nearer to hind angles; elytra ovate, widest at a third instead of at two thirds, marginal channel wider, punctures in the striae a little more conspicuous.

I have adopted the specific name I found on the specimens.

KASHMIR: Sintan Pass (*Carl Rost*) 2 ex. ♂ ♀, coll. Dr. H. Roeschke, who has kindly allowed me to retain the type in my collection.

***Bembidion bolivari* sp. nov.** (fig. 2).

Length: 5.5 mm. Width: 2.0 mm.

Uniform testaceous, elytra very faintly iridescent.

Head (0.9 mm. wide) convex, frontal furrows single, deep, and rather short, surface smooth, impunctate, eyes very small and flat, with large rounded facets, which are not contiguous, genae conspicuous, extending outwards as far as eye, front supra-orbital at mid-eye level, hind one far behind and distant from eye, maxillae long and slender, extending beyond mandibles, maxillary palpi with antepenultimate joint very long and thin, a third longer than joint I of antennae, these being long and rather thick, reaching quite to basal third of elytra, joint 2 = 3, its upper two thirds moderately pubescent. *Prothorax* (1.1 × 1.3 mm.) cordate, convex, sides rounded, with a narrow, reflexed border, sinuate rather near hind angles, which are right and very sharp, without carina; median line and basal depression fairly deep, the former widening a little near base, the foveae small but deep, surface smooth, a few vague punctures along front margin, basal area with some coarse punctures and a few longitudinal striae. *Elytra* (2.15 × 3.3 mm.) elongate oval, depressed, dehiscent at apex, side border ending opposite middle of interval 6, without reaching hind angles of prothorax; striae moderately impressed and finely punctate, deeper

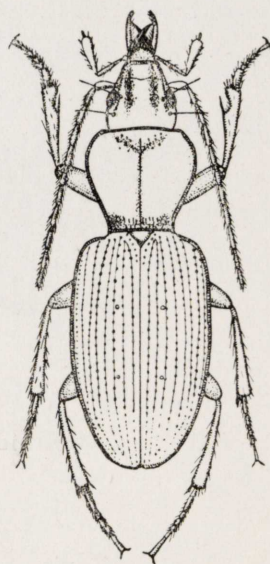


Fig. 2.—*Bembidion bolivari* Andr. × about 10.

close to base, evanescent (except 1) near apex, 8 joining marginal channel at a fourth from base, scutellary striole short, apical stria not very clearly impressed, joining 5 + 6, its pore rather large; intervals slightly convex, 3 with two pores on the interval. The microsculpture of the head consists in a reticulation of isodiametric meshes; that of the prothorax is formed by very fine closely-placed lines, the interspaces divided into very wide meshes; on the elytra the transverse or slightly oblique lines are even finer and only just visible under a magnification of 75 diameters. Underside smooth, metasternal process bordered; protarsi (♂) with two dilated joints, produced inwardly into a fairly sharp tooth.

The uniform testaceous colour of this abnormal species suggests at first sight an *Anophthalmus*, while the small flat eyes and the unusual length of the maxillae and antepenultimate joint of the maxillary palpi differentiate it from any *Bembidion* known to me. The position of the hind supraorbital is very much as in *Lymnaeum*, though owing to the reduction in the size of the eye the distance between it and the eye is much greater.

SIKKIM: 1 ex. ♂, which Dr. Bolívar has kindly allowed me to retain in my collection. This specimen was received with others many years ago by the Madrid Museum from Mr. R. Oberthür. All these specimens were said to come from «Padantsin», a place I cannot find on any map: I think it probable that it came from the neighbourhood of Maria Basti, or Gnatong.

***Bembidion trimaculatum* sp. nov. (fig. 3).**

Length: 3.0-3.5 mm.

Black, shiny: head and prothorax aeneous, joints 2 to 4 of antennae brown, palpi, legs (except apical half of femora), and about half the elytra pale ferruginous. The dark markings on the elytra comprise the suture, a small patch near middle of base, shoulders and margin to a fourth from apex, and three elongate oval patches on apical half, which leave intervals 4 and 5 pale.

Head with single, deep furrows, converging in front and extending

on to clypeus, leaving a convex area between them, which is faintly transversely striate, eyes large and prominent, antennae stout, surface smooth, impunctate. *Prothorax* cordate, convex, a little wider than head and fully a third wider than long, sides of base very oblique near the angles, sides strongly rounded, sinuate close to hind angles, which are sharp, though obtuse, project a little outwards, and are provided with a well marked carina; median line very fine, a few punctures along the shallow transverse front impression, a deep transverse furrow in front of base, along which are some large though vague punctures, basal foveae deep, surface smooth with a few transverse striae just before base. *Elytra* moderately convex, oval, with very square shoulders, not quite half as wide again as prothorax, exactly a half longer than wide, side border reaching stria 5, a clavicular fold present; striae very clearly punctate, inner ones only impressed, I entire, the others evanescent at apex and gradually shortening outwards, 7 barely reaching a third from base, striae short, apical stria obsolete, its pore isolated; intervals nearly flat, 3 with the two pores on the interval, surface smooth. No appreciable microsculpture. Underside smooth. Metasternal process bordered.

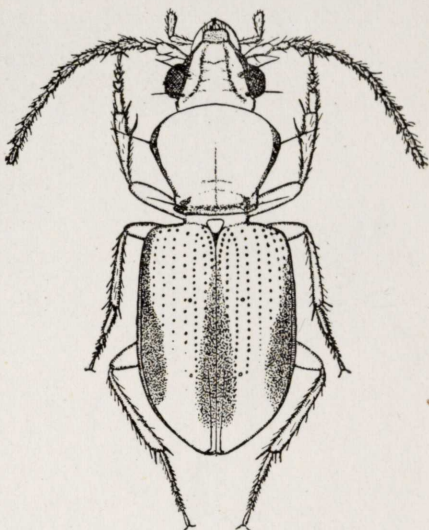


Fig. 3.—*Bembidion trimaculatum*
 Andr. $\times 15$.

In most of its characters agreeing with the subgenus *Lopha*, but the sides of the base of the prothorax are straight and very oblique, without any indentation. The species is wider than any *Lopha* or *Trepanes* known to me, and quite unlike any other described Indian species. Wider than *B. quadrimaculatum* L., the head wider and eyes larger, the prothorax much more strongly rounded at sides, the elytra wider and rather flatter, the striae more evanescent at sides and apex, the pattern quite a different one.

PUNJAB: Upper Jhelum, Daphar Plantation, 4 ex. (*H. G. Champion*). U. P.: Dehra Dun, 1 ex. (*Dr. M. Cameron-Forest Res. Inst.*).

The Dehra Dun ex. is small, pale, and very defective. The type (Daphar Plantation) has been presented by Mr. Champion to the British Museum.

***Broscus taurulus* sp. nov. (fig. 4).**

Length: 17.0-18.0 mm. Width: 5.4-5.8 mm.

Black, rather dull; palpi more or less piceous.

Head (3.5 mm. wide) moderately constricted behind eyes, which are small but prominent, genae conspicuous, as long as eyes and ex-

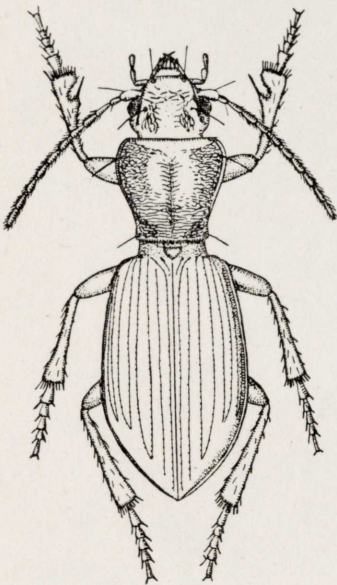


Fig. 4.—*Broscus taurulus*
Andr. $\times 3$.

tending nearly as far outwards, antennae rather thick, pubescent from apex of joint 3, tooth of mentum sulcate, temporal ridges strongly marked in front, interrupted behind, frontal furrows shallow, surface irregularly rugose-striate, punctate in the constriction. *Prothorax* (3.50×4.0 mm.) convex, cordate, strongly contracted behind, sides narrowly bordered, rounded and sinuate at a sixth from base, hind lateral seta rather near the angle, which is right, but not sharp; median line fairly deep, front transverse impression shallow, hind one including the foveae near the angles deep, surface transversely striate, and also along sides and base coarsely rugose. *Elytra* (9.5×5.75 mm.) ovate, convex, the

shoulders obsolete; striae moderately impressed on disk, deeper at sides, vague near apex, finely and not very distinctly crenulate, scutellary striole obsolete; intervals rather flat, more convex at sides, 7 with an irregular impression at base, surface apparently smooth, but microscopically asperate-punctate. Prosternal process sulcate, glabrous, metasternal process bordered, all episterna vaguely punctate, metepisterna elongate, venter practically smooth.

The species is distinguished by its obsolete shoulders and the relative depth of the elytral striae. Compared with *B. punctatus* Dej. the colour is black, not metallic; head more striate, with smaller eyes

and larger genae, neck more constricted, antennae thicker; prothorax hardly punctate in front, much more evidently strigose on disk and rugose along sides and base; elytra strongly narrowed to base and with clearly impressed striae.

SIKKIM: Gnatong, 5 ex. Four of these (one of which I have made the type) were presented to me by Mr. René Oberthür, who also gave the fifth example to the Madrid Museum. Other specimens are in Mr. Oberthür's collection.

***Broscus bipilifer* sp. nov. (fig. 5).**

Length: 14.0-15.0 mm. Width: 4.75-5.25 mm.

Black, upper surface faintly aeneous; palpi and antennae more or less piceous.

Head (3.25 mm. wide) moderately constricted behind eyes, which are small but prominent, genae conspicuous, as long as eyes and extending nearly as far outwards, antennae rather long, pubescent from apex of joint 3, tooth of mentum sulcate, temporal ridges thick in front, interrupted behind, frontal furrows moderately deep, surface subrugose-striate, chiefly in the furrows and constriction. *Prothorax* (3.25 × 3.75 mm.) convex, cordate, strongly contracted behind, but very slightly in front, sinuate at a sixth from base, bordered behind, unbordered and somewhat explanate near front angles, two lateral setae close together in front, one behind not far removed from hind angle, which is right, moderately sharp, and projects a little laterally; median line short but distinct, front transverse impression obsolete, hind one shallow, foveae small, rounded, and fairly deep, surface with some fairly distinct transverse striation, subrugose along base. *Elytra* (8.75 × 5.25 mm.) ovate, convex, shoulders obsolete; striae moder-

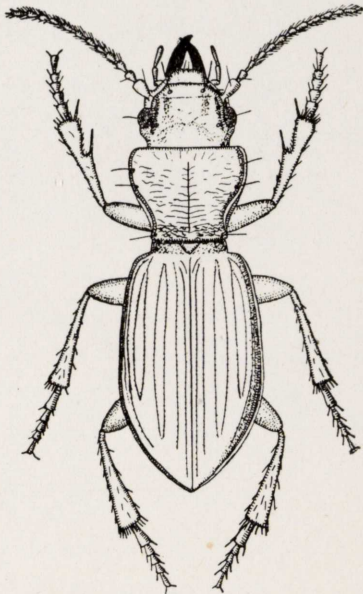


Fig. 5.—*Broscus bipilifer* Andr.
× 3,5.

ately impressed, hardly more deeply at sides, vaguely at apex, finely and rather indistinctly punctate, scutellary striole obsolete; intervals slightly convex, with some confused impressions at base of 7, surface apparently smooth, but microscopically asperate-punctate. Underside as in previous species, but surface smooth throughout.

Strongly resembling *B. taurulus* just described, but smaller and faintly aeneous. Head a little less rugose, prothorax hardly contracted in front and with three lateral setae, surface much less striate-rugose, elytra similar, but a little less contracted in front and with outer striae less impressed, underside smooth.

SIKKIM: Koboug above Gnatong, 2 ex. Received, like the previous species, from Mr. René Oberthür.

***Broscosoma gracile* sp. nov. (fig. 6).**

Length: 8.0 mm. Width: 2.60 mm.

Black, very shiny, upper surface faintly aeneous; antennae and legs piceous brown, palpi a little lighter.

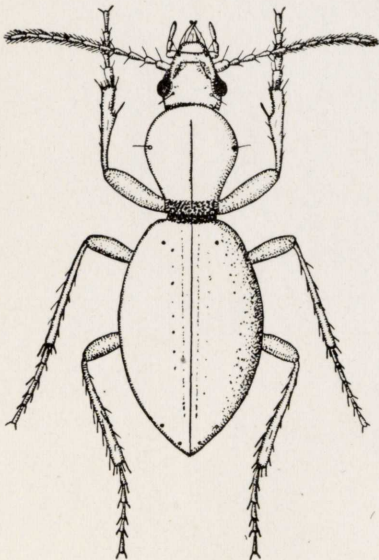


Fig. 6.—*Broscosoma gracile*
Andr. $\times 6$.

Head (1.35 mm. wide) convex, smooth, neck with a deep, impunctate constriction, frontal furrows short, but moderately deep, joined in front by the clypeal suture, temporal ridge obsolete, eyes not prominent, genae evident but very oblique, antennae rather long, pubescent from joint 5. *Prothorax* (2.0 \times 1.7 mm.) very convex, base strongly constricted, basal area finely punctate, surface otherwise smooth, upper and lower surfaces separated by a fine impressed line, at some distance from which and a little before middle is a lateral seta, hind seta apparently wanting; median line distinct, not reaching margins, front transverse impression obsolete. *Elytra* (4.0 \times 2.6 mm.) elongate-oval, convex, widest a little behind middle, shoulders obsolete; stria I rather shallow, faintly punctulate, not reach-

ing either base or apex, 2 just visible on disk, rest wanting in the type (but on a second specimen traces of one or two more striae are visible), surface smooth, with an umbilicate puncture near base, approximately on site of interval 4, and two similar apical punctures, not far from margin. No microsculpture. Underside smooth.

Much smaller than the other Indian species, *B. ribbei* Putz., and otherwise coloured, elytra without shoulders and with stria I shallow. More nearly resembling the palaearctic *B. baldense* Putz., but the elytra form a more elongate oval, the striae are more rudimentary, and there is no pore at the base of stria 2.

SIKKIM: Gnatong and Koboug above Gnatong, 4 ex. Mr. René Oberthür presented two of these specimens to me, and two to the Madrid Museum. The type is in my collection.

***Licinus jaloricus* sp. nov. (fig. 7).**

Length: 14.0 mm. Width: 5.8 mm.

Black, a little dull, apex of palpi ferruginous.

Head (2.75 mm. wide) wide, flattened in front, the foveae fairly wide and deep, substrate, surface with some fine but vague puncturation, labrum hardly emarginate and only slightly asymmetrical, clypeus moderately emarginate in the middle, joint I of antennae much thicker than the other joints, longer than $2 + 3$. *Prothorax* (3.5×4.25 mm.) subconvex, extremities moderately emarginate, apex very finely bordered, sides bordered, gently and evenly rounded (though more contracted behind than in front), with a seta (just visible) before middle and before hind angles, all the angles well rounded but quite evident; median line short and fine, transverse impressions obsolete, basal foveae shallow, surface more coarsely punctate than that of head, disk nearly smooth, basal area and sides behind closely punctate. *Elytra*

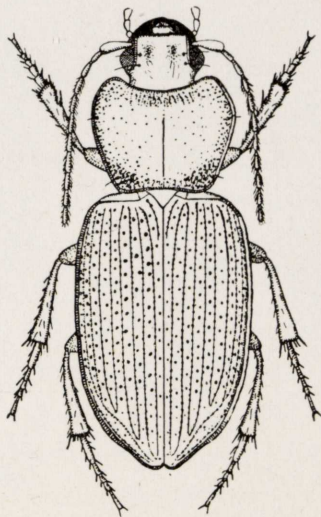


Fig. 7.—*Licinus jaloricus*
Andr. $\times 3.75$.

(8.75×5.0 mm.) moderately convex and nearly oval, the shoulders rounded but evident, with border also rounded at that point, and sinuate before apex, where there is a small re-entrant angle; striae clearly impressed, finely and closely punctulate, intervals only slightly convex, each with an irregular row of coarse punctures, mingled with a few smaller ones, becoming obsolete near apex, 9 widening towards apex, where striae 8 and 9 curve round behind 3-7, all of which terminate before apex. Upper surface finely granulate, more evidently on the elytra than on the head and prothorax. Underside smooth and shiny, metepisterna, sides of metasternum, and base of venter punctate; prosternal process bordered at sides, but not at apex, metasternal process bordered, metepisterna elongate.

The combination of characters presented by this species in its clypeus, joint I of antennae, rounded shoulder-border, prosternal process, and metepisterna, effectively distinguish it from any palaearctic species.

PUNJAB: Seraj, Jalori Pass, 10,800 feet, 1 ex. ♂ (*H. G. Champion*). Mr. Champion has presented the type to the British Museum.

***Pterostichus sintanus* sp. nov.** (fig. 8).

Length: 7.0-7.5 mm.

Black, shiny; antennae and legs brown to piceous, palpi ferruginous.

Head (1.45 mm. wide) convex, with short, moderately deep furrows, eyes not prominent, antennae long and fairly stout, disk smooth, surface punctate at sides and in the furrows. *Prothorax* (1.6×1.9 mm.) cordate, moderately convex, widest at apical third, base truncate, apex slightly emarginate, sides with narrow reflexed border, gently rounded from apex to base, where the hind angle projects as a minute rectangular tooth, front marginal seta at a fourth from apex, hind one wanting; median line moderately impressed, front transverse impression shallow, basal foveae single, deep, narrow and fairly long, surface smooth. *Elytra* (4.0×2.5 mm.) oval, widest just before middle, border forming an obtuse angle at shoulders, which are inconspicuous; striae moderately deep and finely punctate, striae rather

slight, intervals slightly convex, 3 quadripunctate, surface smooth. The reticulation forming the microsculpture is faint on head and prothorax; on the head the meshes are isodiametric, but on prothorax and elytra they are very wide. Underside smooth, but episterna and sides of venter at base punctate; prosternal process unbordered, metasternal process bordered, metepisterna a little longer than wide; ventral segments bisetose, apical segment 4-setose in ♀, bisetose in ♂, in which sex there is a slight asymmetrical depression; last tarsal joint glabrous beneath.

The want of a seta in the hind angles or the prothorax would place the species near *Tapinopterus placidus* Rosh., to which in other respects it bears little resemblance.

In appearance more like *P. strenuus* Panz., the head with deeper frontal foveae and longer antennae, prothorax with deeper basal foveae, much more punctate, the hind angles minute and without seta, elytra more contracted at base, interval 3 quadripunctate, last tarsal joint glabrous.

KASHMIR: Sintan (*Carl Rost*) 5 ex. ♂ ♀, Coll. Dr. H. Roeschke, who has kindly allowed me to retain the type in my collection.

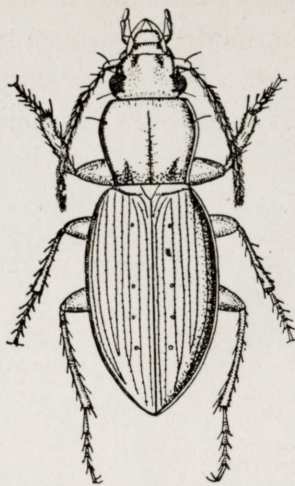


Fig. 8.—*Pterostichus sintanus* Andr. $\times 6.5$.

***Anchomenus ustus* sp. nov. (fig. 9).**

Length: 10.0 mm.

Piceous black: palpi, joints 4-II of antennae, tibiae, and tarsi dull ferruginous.

Head (1.65 mm. wide) convex, neck moderately constricted, frontal furrows short but fairly deep, a faint fovea on each side of vertex (♀ only), eyes flat, genae very oblique, antennae long, pubescent from joint 4, 3 hardly longer than 4. *Prothorax* (2.0 \times 2.45 mm. ♂, 2.55 mm. ♀) moderately convex, about equally contracted at extremities, but widest before middle, base truncate, its sides slightly obli-

que, apex a little emarginate, sides narrowly bordered, rounded from apex to base, somewhat explanate (more widely in ♀), bisetose, hind angles obtuse but evident; median line and front transverse impression moderately deep, basal foveae large and deep, diverging in front, surface smooth, slightly and finely rugose in the foveae. *Elytra* (5.0×4.0 mm.) moderately convex, nearly oval, but widest a little

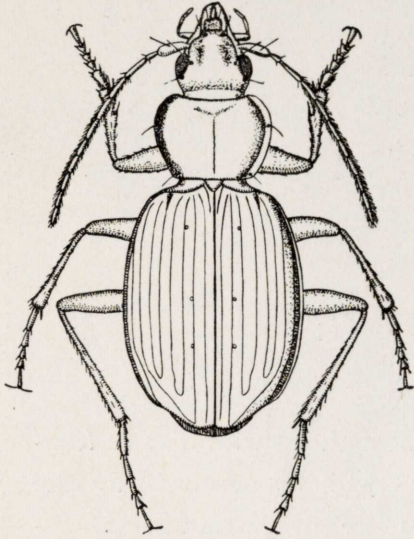


Fig. 9.—*Anchomenus ustus* Andr.
× 5.

behind middle, shoulders well marked, sides sinuate near and separately rounded at apex; striae fairly deep, with traces of minute crenulation, 5 deep close to base, striae short but deep; intervals moderately convex, 3 tripunctate (1 adjoining stria 3, and 2-3 adjoining stria 2), surface slightly dull. Microsculpture of head and elytra isodiametric, very fine and composed of very wide meshes on the prothorax. Prosternal process unbordered, metepisterna only a little longer than wide, last ventral segment (♂ ♀) with two setae on each side; protarsi with joint 4 rather deeply emarginate, meso and metatarsal

joints long and slender, sulcate at sides but not evidently carinate. Body apterous.

Closely resembling *Colpodes eulabes* Bates, which is poorly described and seems more of an *Anchomenus* than a *Colpodes*. In Bates, species the antennae are shorter and paler; the prothorax has both base and apex bordered, and the sides are faintly sinuate before base; the striae of the elytra are more evidently crenulate, 5 is no deeper at base than the others, while the microsculpture is fainter, the meshes of the reticulation strongly transverse; meso- and metatarsal joints evidently sulcate when viewed from above.

KASHMIR: Kishtawar Panjal (*Carl Rost*) 2 ex. ♂ ♀, collection Dr. H. Roeschke, who has kindly allowed me to retain the type in my collection.

Anchomenus ustus var. **belli** nov.

An example (♂) taken many years ago by Mr. T. R. D. Bell is a little smaller than the type form (9.5 mm. long.) with legs, antennae, and palpi piceous, the two last ferruginous at apex only. The prothorax is somewhat less contracted behind, and the elytra a little more in front, but otherwise the structural characters are the same.

The specimen was taken in Kashmir, I think near Sonemarg.

Anchomenus incisus sp. nov. (fig. 10).

Length: 9.0 mm.

A little smaller than *A. ustus*, but very closely allied, similarly coloured, and differing in the following particulars. Head with rather more prominent eyes, more rapidly contracted behind, and with a deeper neck constriction. Prothorax a little more contracted behind, both base and apex finely bordered, sides explanate behind only, hind marginal pore making a slight incision in the border just before hind angles, basal foveae finely though sparsely punctate, each with a double linear impression. Elytra rather more finely striate, the striae very shallow near apex, 5 not deeper than the others near base, border only faintly sinuate behind. Microsculpture, underside, and legs similar, but the tarsal joints are not quite so long and slender.

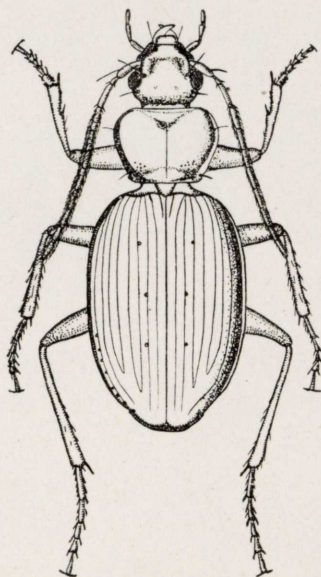


Fig. 10.—*Anchomenus incisus*
Andr. $\times 5,25$.

KASHMIR: Sinton (*Carl Rost*) 2 ex. ♂♀, coll. Dr. H. Roeschke, who has kindly allowed me to retain the type in my collection.

